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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/941,505	08/28/2001	Patrick H. Kilawee	E14.2-9861	6840

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VIDAS, ARRETT & STEINKRAUS, P.A.
6109 BLUE CIRCLE DRIVE
SUITE 2000
MINNETONKA, MN 55343-9185

EXAMINER

MCKANE, ELIZABETH L

ART UNIT	PAPER NUMBER
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1744

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/941,505

Applicant(s)

KILAWEE ET AL.

Examiner

Leigh McKane

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-11,14-16 and 18-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7,8 and 21 is/are allowed.
- 6) ☒ Claim(s) 1,3-5,9-11,14-16,18-20 and 22-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

1. Claims 14 and 23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 14, the recitation that “said container is a sachet holder” is confusing since the container, as set forth in claim 1, is permeable to water vapor and holds the composition. The Examiner submits that “said container” should be changed to read – said holder--.

As to claim 23, in line 6, “the container” lacks positive antecedent basis as no such element has yet been recited. Furthermore, claim 23 is confusing as the “drawer” and the “holder” appear to be the same element, as they both hold the container and composition.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

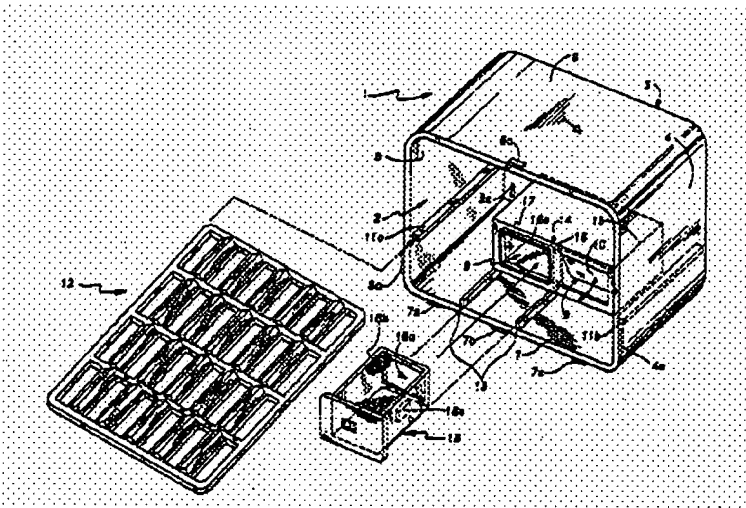
A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claim 23 is rejected under 35 U.S.C. 102(b) as being anticipated by Acosta, Sr. et al. (U.S. 5,165,181).

Acosta, Sr. et al teaches a unit (unlabeled dryer box within enclosure 1) including an enclosed space and further including a holder 18 accessible through access port 8. Holder 8 is a



drawer which is openable from the exterior of the unit and has a perforated bottom.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

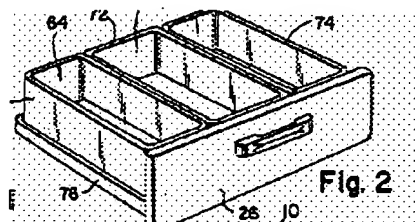
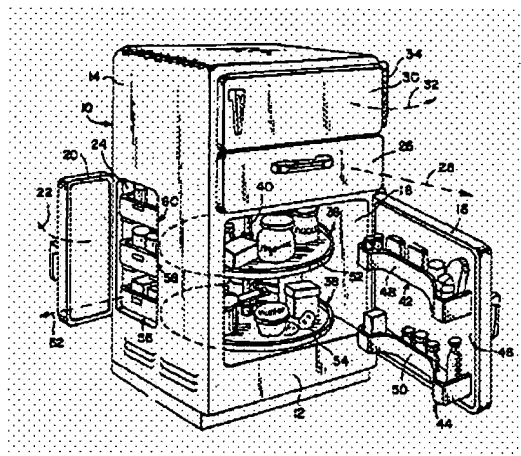
(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, 3-5, 9-11, 14-16, 18, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Locke (U.S. 4,123,130) in view of Mason et al. (U.S. 4,547,381) and Wellinghoff et al. (U.S. 5,888,528).

With respect to claims 1, 4, 5, 9, 11, 14-16, 18, and 19, Locke teaches a unit 10 including

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an enclosed space not easily accessible, having an interior and an exterior. The unit 10 of Locke further includes an access port (drawer) 26 openable from the top front of the unit and which



allows access to a holder 64 located in the interior of the enclosed space. See Figures 1 and 2. Locke fails to teach a permeable container holding a composition which generates halogen or chlorine dioxide gas upon exposure to water or water vapor.

Mason et al teaches a dry, solid composition which generates chlorine dioxide gas upon exposure to water or water vapor. The composition is especially suitable for the deodorization and disinfection of enclosed spaces such as refrigerators or lockers. See Abstract, col.3, lines 6-19 and lines 43-48. The composition is composed of a metal chlorite and an acidic component. See col.4, lines 4-50. It would have been obvious to use the composition of Mason et al in the apparatus of Locke because Mason et al specifically teaches the need to deodorize closed spaces such as refrigerators. It would have been obvious to put the composition with the drawer 26 and holder 64 of Locke because it would have been a convenient and easily accessible means by which to access the interior of the enclosed space. Mason et al fails to disclose a container for the composition.

Wellinghoff et al discloses a sustained release composition wherein the composition releases chlorine or chlorine dioxide gas upon exposure to water or water vapor. See col.4, lines 33-40; col.7, line 64 to col.8, line 12; col.8, lines 41-49. The composition is held within a gas-permeable container. See col.14, lines 48-51. Although not expressly stated, the gas-permeable container must necessarily be permeable to water vapor since the composition of Wellinghoff et al is activated by exposure to ambient moisture. See col.13, lines 60-65. As providing the chlorine dioxide-generating composition of Mason et al within a gas-permeable container allows release of the generated gas while affording containment of the powder, it would have been an obvious modification to the combination of Locke with Mason et al.

As to claim 3, since Mason et al discloses generating chlorine dioxide gas, a metal hypochlorite is not used. However, Wellinghoff et al teaches that both chlorine dioxide and chlorine gas are biocidally effective. When generating chlorine gas, a metal hypochlorite such as sodium hypochlorite is used in the reaction with the acid. See col.8, lines 41-49. As chlorine gas is a functional equivalent of chlorine dioxide gas, it would have been obvious to use a composition capable of generating chlorine gas in the method of the combination.

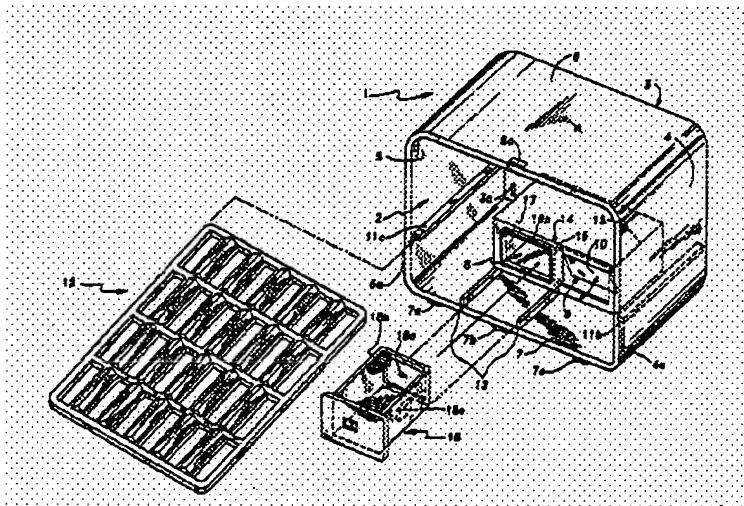
With respect to claim 10, it is deemed obvious to optimize the amount of gas generating composition used based upon the size of the enclosure and the expected level of contamination within the enclosure. A result effective variable, such as use amount, is readily determinable through routine experimentation by one of ordinary skill in the art.

6. Claims 1, 3-5, 10, 11, 14-16, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Acosta, Sr. et al. (U.S. 5,165,181) in view of Wellinghoff et al.

With respect to claims 1, 3-5, 11, 14-16, and 20, Acosta, Sr. et al teaches a "locker" unit

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(unlabeled dryer box within enclosure 1) including an enclosed space and further including a holder 18 accessible through access port 8. Access port 8 is a drawer which is openable from the exterior of the unit. Acosta, Sr. et al. fails to disclose a permeable container holding a



composition with generates halogen or chlorine dioxide gas upon exposure to water or water vapor.

Wellinghoff et al discloses a sustained release composition wherein the composition releases chlorine or chlorine dioxide gas upon exposure to

water or water vapor. See col.4, lines 33-40; col.7, line 64 to col.8, line 12; col.8, lines 41-49. A metal chlorite is used to generate chlorine dioxide and a alkali metal hypochlorite (sodium hypochlorite) is used to generate chlorine gas. See col.7, line 64 to col.8 line 12 and col.8, lines 41-49. The composition is held within a gas-permeable container (col.14, lines 48-51) and is effective in deodorizing athletic shoes and footwear (col.14, lines 47-48). Although not expressly stated, the gas-permeable container must necessarily be permeable to water vapor since the composition of Wellinghoff et al is activated by exposure to ambient moisture. See col.13, lines 60-65.

It would have been obvious to place the gas-generating container of Wellinghoff et al. in the holder 18 of Acosta, Sr. et al to deodorize the space within the dryer since Acosta, Sr. et al recognizes the need to deodorize the space (col.4, lines 2-12) and since Wellinghoff et al. teaches that the biocidal gases are also effective in deodorization.

As to claim 10, it is deemed obvious to optimize the amount of gas generating composition used based upon the size of the enclosure and the expected level of contamination within the enclosure. A result effective variable, such as use amount, is readily determinable through routine experimentation by one of ordinary skill in the art.

7. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Locke in view of Mason and Hamilton et al. (U.S. 6,607,696).

Locke teaches a unit 10 including an enclosed space not easily accessible, having an interior and an exterior. The unit 10 of Locke further includes an access port (drawer) 26 openable from the exterior and which allows access to a holder 64 located in the interior of the enclosed space. See Figures 1 and 2. Locke fails to teach a microporous nonwoven hydrophobic polymer container holding a composition with generates halogen or chlorine dioxide gas upon exposure to water or water vapor.

Mason et al teaches a dry, solid composition which generates chlorine dioxide gas upon exposure to water or water vapor. The composition is especially suitable for the deodorization and disinfection of enclosed spaces such as refrigerators or lockers. See Abstract; col.3, lines 6-19 and lines 43-48. The composition is composed of a metal chlorite and an acidic component. See col.4, lines 4-50. It would have been obvious to use the composition of Mason et al in the apparatus of Locke because Mason et al specifically teaches the need to deodorize closed spaces such as refrigerators. It would have been obvious to put the composition with the drawer 26 and holder 64 of Locke because it would have been a convenient and easily accessible means by which to access the interior of the enclosed space. Mason et al fails to disclose a container for the composition.

Hamilton et al. teaches a composition for the controlled generation and delivery of chlorine dioxide gas upon contact with water. See Abstract. The composition is held within a microporous hydrophobic polypropylene envelope, which permits water vapor transmission through the envelope to the composition to initiate the gas-generating reaction. See col.7, lines 11-42; col.8, lines 25-28. As the envelope of Hamilton et al safely contains the chemical reactants while still allowing water vapor transmission into the envelope and gas transmission out of the envelope, it would have been an obvious means to safely enclose the chemical reactants of Mason et al., for ease of handling.

8. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Locke, Mason et al., and Hamilton et al. as applied to claim 22 above, and further in view of Twardowski et al. (U.S. 4,683,039).

The combination *supra* is silent with respect to the container being fabricated from nonwoven polyethylene or nonwoven polytetrafluoroethylene. Twardowski et al discloses known hydrophobic microporous materials such as nonwoven polytetrafluoroethylene and nonwoven polyethylene (col.2, lines 11-26). Twardowski et al teaches that these materials permit the passage of gas but prevent the passage of aqueous solutions.

Since Hamilton et al. discloses that other hydrophobic films can be used in place of the polypropylene (col.7, lines 40-42), it is deemed obvious to one of ordinary skill in the art to substitute one know hydrophobic microporous film for another where the results are not unexpected.

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9. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Acosta, Sr. et al. in view of Wellinghoff et al..

Acosta, Sr. et al. fails to disclose a permeable container holding a composition which generates an antimicrobial gas upon exposure to water or water vapor.

Wellinghoff et al discloses a sustained release composition wherein the composition releases chlorine or chlorine dioxide gas upon exposure to water or water vapor. See col.4, lines 33-40; col.7, line 64 to col.8, line 12; col.8, lines 41-49. The composition is held within a gas-permeable container (col.14, lines 48-51) and is effective in deodorizing athletic shoes and footwear (col.14, lines 47-48). Although not expressly stated, the gas-permeable container must necessarily be permeable to water vapor since the composition of Wellinghoff et al is activated by exposure to ambient moisture. See col.13, lines 60-65.

It would have been obvious to place the gas-generating container of Wellinghoff et al. in the holder 18 of Acosta, Sr. et al to deodorize the space within the dryer since Acosta, Sr. et al recognizes the need to deodorize the space (col.4, lines 2-12) and since Wellinghoff et al. teaches that the biocidal gases are also effective in deodorization.

Allowable Subject Matter

10. Claims 7, 8, and 21 are allowed.

11. The following is an examiner's statement of reasons for allowance: The prior art of record, although teaching a unit having an access port and a container, fails to teach an indicator device activated upon each placement or replacement of the container, wherein the container is

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permeable to water or water vapor and holds a composition which generates an antimicrobially active gas.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

12. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion


13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Aoyagi (U.S. 6,363,734) teaches a means of generating chlorine dioxide within an enclosed space (A/C system).

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leigh McKane whose telephone number is 571-272-1275. The examiner can normally be reached on Monday-Wednesday (5:30 am-3:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Kim can be reached on 571-272-1142. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Leigh McKane
Primary Examiner
Art Unit 1744

elm
8 August 2005